



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

08/749,766

11/20/1996

RANDALL B. METCALF

21285.0103

3143

29315

7590

05/10/2004

MINTZ LEVIN COHN FERRIS GLOVSKY AND POPEO PC  
12010 SUNSET HILLS ROAD  
SUITE 900  
RESTON, VA 20190

EXAMINER

SWERDLOW, DANIEL

ART UNIT

PAPER NUMBER

2644

44

DATE MAILED: 05/10/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

08/749,766

Applicant(s)

METCALF, RANDALL B.

Examiner

Daniel Swerdlow

Art Unit

2644

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 29 March 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1,29,30 and 56-109 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,29,30 and 56-109 is/are rejected.
- 7) ☒ Claim(s) 79 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 43.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

### **DETAILED ACTION**

1. This office Action is in response to the amendment filed 29 March 2004, paper no. 43.

Pending claims as of that amendment are 1, 29, 30 and 56 through 109.

#### ***Claim Objections***

2. Claim 79 is objected to because of the following informalities: The recitation "one group of amplifier element" appears in the 2<sup>nd</sup> line. This should read --one group of amplifier elements--. Appropriate correction is required.

#### ***Claim Rejections - 35 USC § 112***

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claim 67 recites the limitation "said amplification means" in the 2<sup>nd</sup> line. There is insufficient antecedent basis for this limitation in the claim. For the purpose of this Office action, examiner assumes the intended recitation is --said amplifier means--.

5. Claim 72 recites the limitation "the dynamic controller" in the 2<sup>nd</sup> line. There is insufficient antecedent basis for this limitation in the claim. For the purpose of this Office action, examiner assumes the intended recitation is --the dynamic control means--.

6. Claim 89 recites the limitation "the dynamic controller" in the 2<sup>nd</sup> and 3<sup>rd</sup> lines. There is insufficient antecedent basis for this limitation in the claim. For the purpose of this Office action, examiner assumes the intended recitation is --the dynamic control means--.

***Claim Rejections - 35 USC § 103***

7. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

8. Claims 1, 29, 30, 108 and 109 are rejected under 35 U.S.C. 103(a) as being unpatentable over Phinney (US Patent 1,765,735) in view of Odom (US Patent 5,740,260).

9. Regarding Claim 1, Phinney discloses “the use of sound recording devices, each corresponding to a particular section of a concerted performance, whereby the complete characteristics of each section may be separately recorded and controlled, together with a plurality of corresponding reproducing devices whose individual operations are combined to give to an auditor an impression corresponding to that of an original performance” (page 1, lines 22-31) (i.e., a sound system for capturing and reproducing sounds produced by a plurality of sound sources comprising: means for separately receiving sounds produced by the plurality of sound sources (Fig. 1, reference 1); means for converting the separately received sound sources to a plurality of separate audio signals without mixing the audio signals (Fig. 1, reference 8, 9); and means for separately storing the plurality of separate audio signals without mixing the audio signals (Fig. 1, reference 11-17). Phinney further discloses reproduction with each loudspeaker operated under control of a corresponding one of the sound records (page 2, lines 69-74) (i.e., means for separately retrieving over separate signal paths the stored audio signals (Fig. 2). Phinney further discloses a suitable amplifying apparatus associated with each sound record (page 2, lines 101-104) (i.e., an amplification network comprising a plurality of amplifier means (Fig. 2, reference 27, 28) with separate amplifier means in the separate signal paths for separately amplifying each of the separate audio signals). The limitation in the claim “each of the amplifier

Art Unit: 2644

means comprising one or more amplifier elements” reads on any amplifier since any amplifier must have at least one element. Phinney further discloses a plurality of loudspeaking devices, each operated under control of a corresponding one of the sound records (page 2, lines 69-74) (i.e., a loudspeaker network comprising a plurality of loudspeaker means, with separate loudspeaker means in the separate signal paths for reproducing the separately amplified audio signals (Fig. 2, reference 18, 19). Therefore, Phinney anticipates all elements of Claim 1 except the amplifier means being under common control and a dynamic control means for individually controlling each of the amplifier means to enable automatic simultaneous control over the amplifier means. Odom discloses a sound processor interface that individually controls volume on a plurality of audio channels (column 3, lines 15-30, 56-60). Odom further discloses the sound processor being suitable for adapting an audio program that frequently changes venues (column 2, lines 44-59; column 3, lines 53-61). Phinney discloses use of the recording and reproducing system in conjunction with a motion picture (page 2, lines 115-125). Because motion pictures are projected in theatres with varying configurations and acoustic characteristics, it would have been obvious to one skilled in the art at the time of the invention to apply automatic individual control of audio channel volume as taught by Odom to the recording and reproducing system taught by Phinney for the purpose of rapidly adapting the system to different locations and providing a convenient way to save and reapply previously saved parameters for a particular location (Odom: column 2, line 44 through column 3, line 6).

10. Regarding Claim 29, all elements of Claim 29 are comprehended by Claim 1 except the dynamic control means controlling individual elements of the amplifier means. Odom discloses an analog signal processor in each audio signal channel (column 6, lines 30-36) that forms an

Art Unit: 2644

element of the amplifier means for that channel and is automatically controlled. As such, the combination of Phinney and Odom includes the dynamic control means controlling individual elements of the amplifier means.

11. Regarding Claim 30, all elements of Claim 30 are comprehended by Claim 1. As such, the combination of Phinney and Odom makes obvious all elements of Claim 30.

12. Regarding Claim 108, all elements of Claim 108 are comprehended by Claim 29. As such, the combination of Phinney and Odom makes obvious all elements of Claim 108.

13. Regarding Claim 109, all elements of Claim 109 are comprehended by Claim 108. As such, the combination of Phinney and Odom makes obvious all elements of Claim 109.

14. Claims 56 through 63, 69, 82 through 89 and 95 are rejected under 35 U.S.C. 103(a) as being unpatentable over Phinney in view of Odom and further in view of Herleman et al. (US Patent 3,540,545).

15. Regarding Claim 56, Phinney further discloses sound sources having different sonic characteristics (page 2, lines 20-26). Therefore, the combination of Phinney and Odom makes obvious all elements except loudspeaker means customized according to one or more sonic characteristics of the sounds on its signal path. Herleman discloses a horn speaker customized according to the sonic characteristics of the sounds it reproduces (column 3, line 69 through column 4, line 5). It would have been obvious to one skilled in the art at the time of the invention to apply the use of customized loudspeakers as taught by Herleman to the combination made obvious by Phinney and Odom for the purpose of better simulating the sound of a particular instrument.

Art Unit: 2644

16. Regarding Claim 57, Herleman further discloses customizing the speaker according to frequency range (column 3, line 73 through column 4, line 2).

17. Regarding Claim 58, Herleman further discloses customizing the speaker according to directional characteristics (column 3, lines 69-72).

18. Regarding Claim 59, Herleman further discloses customizing the speaker according to frequency range (column 3, line 73 through column 4, line 2) and directional characteristics (column 3, lines 69-72).

19. Regarding Claim 60, Herleman further discloses two loudspeaker elements (Fig. 1, reference 14, 18; column 2, lines 11-25) and selection of loudspeaker elements (column 4, lines 11-13) based on desired frequency characteristics.

20. Regarding Claim 61, Herleman further discloses two loudspeaker elements (Fig. 1, reference 14, 18; column 2, lines 11-25) and arrangement of loudspeaker elements (column 4, lines 19-21) based on directivity.

21. Regarding Claim 62, Herleman further discloses two loudspeaker elements (Fig. 1, reference 14, 18; column 2, lines 11-25) and selection of loudspeaker elements (column 4, lines 11-13) based on desired frequency characteristics and arrangement of loudspeaker elements (column 4, lines 19-21) based on directivity.

22. Regarding Claim 63, as shown above apropos of Claim 1, the combination of Phinney and Odom makes obvious all elements except loudspeaker means comprising two or more loudspeaker elements controlled by the dynamic control means. Herleman discloses two loudspeaker elements (Fig. 1, reference 14, 18; column 2, lines 11-25) and selection of loudspeaker elements (column 4, lines 10-13) by a foot switch. It would have been obvious to

Art Unit: 2644

one skilled in the art at the time of the invention to apply the controlled use of two loudspeaker elements as taught by Herleman to the combination made obvious by Phinney and Odom for the purpose of more realistic reproducing the sound of certain instruments. Further, Odom discloses interchangeability of control by foot pedal or digital sequencer (i.e., dynamic control means) (column 3, lines 56-61). It would have been obvious to one skilled in the art at the time of the invention to apply external digital control of loudspeaker element selection as taught by Odom to the combination made obvious by Phinney, Odom and Herleman for the purpose of rapidly adapting the system to different environments and providing a convenient way to save and reapply previously saved parameters (Odom: column 2, line 44 through column 3, line 6).

23. Regarding Claim 69, as shown above apropos of Claim 1, the combination of Phinney and Odom makes obvious amplifier means being under common control and a dynamic control means for individually controlling each of the amplifier means to enable automatic simultaneous control over the amplifier means. Therefore, the combination of Phinney, and Odom makes obvious all elements except loudspeaker means controlled by the dynamic control means.

Herleman discloses two loudspeaker elements (Fig. 1, reference 14, 18; column 2, lines 11-25) and selection of loudspeaker elements (column 4, lines 10-13) by a foot switch. It would have been obvious to one skilled in the art at the time of the invention to apply the controlled use of two loudspeaker elements as taught by Herleman to the combination made obvious by Phinney and Odom for the purpose of more realistic reproducing the sound of certain instruments.

Further, Odom discloses interchangeability of control by foot pedal or digital sequencer (i.e., dynamic control means) (column 3, lines 56-61). It would have been obvious to one skilled in the art at the time of the invention to apply external digital control of loudspeaker element



Art Unit: 2644

selection as taught by Odom to the combination made obvious by Phinney, Odom and Herleman for the purpose of rapidly adapting the system to different environments and providing a convenient way to save and reapply previously saved parameters (Odom: column 2, line 44 through column 3, line 6).

24. Claims 82 through 89 and 95 are essentially similar to Claims 56 through 63 and 69, respectively, and are rejected on the grounds.

25. Claims 67, 68, 70 through 77, 93, 94 and 96 through 103 are rejected under 35 U.S.C. 103(a) as being unpatentable over Phinney in view of Odom and further in view of Edwards (US Patent 4,422,048).

26. Regarding Claim 67, Phinney further discloses sound sources producing sounds having different sonic characteristics (page 2, lines 20-26). Therefore, the combination of Phinney and Odom makes obvious all elements except amplifier means customized according to sonic characteristics of audio signals in a signal path. Edwards discloses setting (i.e., customizing) gain (i.e., amplifier means) for each frequency band (i.e., based on characteristics of the audio signals) to be amplified (column 7, lines 40-47). Odom further discloses the desirability of adapting the equalization (i.e., individual channel frequency response) of an audio program that frequently changes venues (column 2, lines 44-59). Phinney discloses use of the recording and reproducing system in conjunction with a motion picture (page 2, lines 115-125). Because motion pictures are projected in theatres with varying configurations and acoustic characteristics, it would have been obvious to one skilled in the art at the time of the invention to apply automatic individual control of audio channel frequency response as taught by Edwards to the

Art Unit: 2644

combination made obvious by Phinney and Odom for the purpose of adjusting amplifier frequency response smoothly and accurately.

27. Regarding Claim 68, Phinney further discloses sound sources producing sounds having different sonic characteristics (page 2, lines 20-26). Therefore, the combination of Phinney and Odom makes obvious all elements except each amplifier means customized according to sonic characteristics of audio signals in a signal path. Edwards discloses setting (i.e., customizing) gain (i.e., amplifier means) for each frequency band (i.e., based on characteristics of the audio signals) to be amplified (column 7, lines 40-47). Odom further discloses the desirability of adapting the equalization (i.e., individual channel frequency response) of an audio program that frequently changes venues (column 2, lines 44-59). Phinney discloses use of the recording and reproducing system in conjunction with a motion picture (page 2, lines 115-125). Because motion pictures are projected in theatres with varying configurations and acoustic characteristics, it would have been obvious to one skilled in the art at the time of the invention to apply the frequency response controller taught by Edwards to each amplifier in the combination made obvious by Phinney and Odom for the purpose of adjusting amplifier frequency response smoothly and accurately.

28. Regarding Claim 70, as shown above apropos of Claim 1, the combination of Phinney and Odom makes obvious all elements except the amplifier means comprising more than one amplifier element in a signal path. Edwards discloses a frequency response controller for an audio signal path (Fig. 3; column 1, lines 46-53) comprising a plurality of amplifier elements (Fig. 3, reference 22a-j, 39a-j; column 7, lines 59-65; column 9, lines 1-2). Odom further discloses the desirability of adapting the equalization (i.e., individual channel frequency

Art Unit: 2644

response) of an audio program that frequently changes venues (column 2, lines 44-59). Phinney discloses use of the recording and reproducing system in conjunction with a motion picture (page 2, lines 115-125). Because motion pictures are projected in theatres with varying configurations and acoustic characteristics, it would have been obvious to one skilled in the art at the time of the invention to apply the frequency response controller comprising more than one amplifier in a signal path as taught by Edwards to the combination made obvious by Phinney and Odom for the purpose of adjusting amplifier frequency response smoothly and accurately.

29. Regarding Claim 71, Edwards further discloses setting (i.e., customizing) gain (i.e., amplifier elements) for each frequency band (i.e., based on characteristics of the audio signals) to be amplified (column 7, lines 40-47).

30. Regarding Claim 72, Edwards further discloses external control of frequency response (i.e., amplifier elements separately controllable by the dynamic control means) (Figs. 5, 6; column 11 lines 47-52).

31. Regarding Claim 73, Edwards further discloses more than one group of amplifier elements (Fig. 3, references 22a and 39a, 22b and 39b, 22c and 39c, 22j and 39j) for each signal path.

32. Regarding Claim 74, Edwards further discloses setting (i.e., customizing) gain (i.e., amplifier elements) for the pair (i.e., group) of amplifier elements for each frequency band (i.e., based on characteristics of the audio signals) to be amplified (column 7, lines 40-47).

33. Regarding Claim 75, Edwards further discloses external control of frequency response (i.e., groups of amplifier elements separately controllable by the dynamic controller) (Figs. 5, 6; column 11 lines 47-52).

Art Unit: 2644

34. Regarding Claim 76, as shown above apropos of Claim 71, the combination of Phinney, Odom and Edwards is shown to make obvious all elements except amplifier elements separately controllable by the dynamic control means. Edwards further discloses external control of frequency response (i.e., amplifier elements separately controllable by the dynamic control means) (Figs. 5, 6; column 11 lines 47-52).

35. Regarding Claim 77, as shown above apropos of Claim 74, the combination of Phinney, Odom and Edwards is shown to make obvious all elements except groups of amplifier elements separately controllable by the dynamic control means. Edwards further discloses external control of frequency response (i.e., groups of amplifier elements separately controllable by the dynamic control means) (Figs. 5, 6; column 11 lines 47-52).

36. Claims 93, 94 and 96 through 103 are essentially similar to Claims 67, 68 and 70 through 77, respectively, and are rejected on the same grounds.

37. Claims 80 and 106 are rejected under 35 U.S.C. 103(a) as being unpatentable over Phinney in view of Odom and further in view of Edwards and further in view of Herleman.

38. Regarding Claim 80, as shown above apropos of Claim 76, the combination of Phinney, Odom and Edwards is shown to make obvious all elements except sound sources having different sonic characteristics and loudspeaker means customized according to one or more sonic characteristics of the sounds on its signal path. Phinney further discloses sound sources having different sonic characteristics (page 2, lines 20-26). Therefore, the combination of Phinney, Odom and Edwards makes obvious all elements except loudspeaker means customized according to one or more sonic characteristics of the sounds on its signal path. Herleman discloses a horn

Art Unit: 2644

speaker customized according to the sonic characteristics of the sounds it reproduces (column 3, line 69 through column 4, line 5). Herleman further discloses that the use of such a loudspeaker is highly desirable (column 4, lines 2-5). It would have been obvious to one skilled in the art at the time of the invention to apply the use of customized loudspeakers as taught by Herleman to the combination made obvious by Phinney, Odom and Edwards for the purpose of better simulating the sound of a particular instrument.

39. Claim 106 is essentially similar to Claim 80 and is rejected on the same grounds.

40. Claims 64, 65, 81, 90, 91 and 107 are rejected under 35 U.S.C. 103(a) as being unpatentable over Phinney in view of Odom as applied to Claim 1 above, and further in view of Camras (US Patent 3,158,695).

41. Regarding Claim 64, as shown above apropos of Claim 1, the combination of Phinney and Odom makes obvious all elements except means for enabling a user to elect to intentionally group together audio signals from two or more sound sources for playback over a common signal path. Camras discloses combining sound patterns received by different microphones and recorded on separate channels for connection to a single loudspeaker (Fig. 5; column 6, lines 45-64). Camras further discloses that combining a plurality of separately recorded and stored audio channels for playback on a common signal path can achieve a more economical playback system (column 7, lines 5-8). It would have been obvious to one skilled in the art at the time of the invention to apply signal grouping as taught by Camras to the combination made obvious by Phinney and Odom for the purpose of utilizing the recording in a more economical playback system.

Art Unit: 2644

42. Regarding Claim 65, Phinney further discloses separate storage of sound sources (page 2, lines 46-53; Fig. 1, reference 17, 17'). Therefore, the combination of Phinney and Odom makes obvious all elements except intentional playback over a common signal path. Camras discloses combining sound patterns received by different microphones and recorded on separate channels for connection to a single loudspeaker (Fig. 5; column 6, lines 45-64). Camras further discloses that combining a plurality of separately recorded and stored audio channels for playback on a common signal path can achieve a more economical playback system (column 7, lines 5-8). It would have been obvious to one skilled in the art at the time of the invention to apply playback over a common signal path as taught by Camras to the combination made obvious by Phinney and Odom for the purpose of utilizing the recording in a more economical playback system.

43. Regarding Claim 81, Phinney further discloses the use of any form of electromechanical recorder (page 2, lines 52-54). Therefore, the combination of Phinney and Odom makes obvious all elements except the audio signals stored on a common recording medium. Camras discloses recording (i.e., storing) a plurality of unmixed audio signals on the same (i.e., a common) recording medium (Figs. 2-3, reference 35; column 2, lines 58-71). Phinney further discloses the need to synchronize the recording and reproducing of the different signals (page 2, lines 55-61, 98-101). It would have been obvious to one skilled in the art at the time of the invention to apply the common recording medium taught by Camras to the combination made obvious by Phinney and Odom for the purpose of simplifying the synchronization of the separate signals.

44. Claims 90, 91 and 107 are essentially similar to Claims 64, 65 and 81, respectively, and are rejected on the same grounds.

Art Unit: 2644

45. Claims 66 and 92 are rejected under 35 U.S.C. 103(a) as being unpatentable over Phinney in view of Odom as applied to Claim 1 above, and further in view of Ariga et al. (US Patent 4,408,095).

46. Regarding Claim 66, as shown above apropos of Claim 1, the combination of Phinney and Odom makes obvious all elements except that two or more sound sources having similar characteristics may be separately received, converted and stored, but intentionally mixed together during playback and passed through a common loudspeaker means. Ariga discloses an acoustic apparatus (Fig.; column 1, lines 40-42, 62-64) in which low frequency sounds (i.e., having similar characteristics) from separate channels (i.e., separately received, converted and stored) are mixed together during playback. Ariga further discloses that cost can be reduced through this practice (column 2, lines 42-43). It would have been obvious to one skilled in the art at the time of the invention to apply mixing of signals with similar sonic characteristics as taught by Ariga to the combination made obvious by Phinney and Odom for the purpose of improving reproduction and reducing cost.

47. Claim 92 is essentially similar to Claim 66 and is rejected on the same grounds.

48. Claims 78, 79, 104 and 105 are rejected under 35 U.S.C. 103(a) as being unpatentable over Phinney in view of Odom as applied to Claim 1 above, and further in view of de Koning et al. (US Patent 4,481,660).

49. Regarding Claim 78, as shown above apropos of Claim 1, the combination of Phinney and Odom makes obvious all elements except amplifier means comprising more than one amplifier element and the dynamic control means selectively turning on or off individual

Art Unit: 2644

amplifier elements. De Koning discloses an amplifier system comprising a plurality of amplifier elements (Fig. 3, reference 3.1, 6.1-6.k; column 6, lines 52-60) that are selectively turned on and off by switches (Fig. 3, reference 8, 9) under control of a measuring unit (i.e., dynamic control means) (Fig. 3, reference 10). De Koning further discloses that total power requirements can be reduced in this way (column 2, lines 3-9). It would have been obvious to one skilled in the art at the time of the invention to apply controlled amplifier elements as taught by de Koning to the combination made obvious by Phinney and Odom for the purpose of reducing amplifier power demand.

50. Regarding Claim 79, as shown above apropos of Claim 1, the combination of Phinney and Odom makes obvious all elements except amplifier means comprising more than one group of amplifier elements and the dynamic control means selectively turning on or off individual amplifier elements within a group. De Koning discloses an amplifier system comprising a plurality of groups of amplifier elements (Fig. 3, reference 3.1, 6.1-6.k; Fig. 4, reference 17, 18, 20; column 6, lines 52-60; column 7, lines 10-12) that include measuring amplifier elements and are selectively turned on and off by switches (Fig. 3, reference 8, 9) under control of a measuring unit (i.e., dynamic control means) (Fig. 3, reference 10). De Koning further discloses that total power requirements can be reduced in this way (column 2, lines 3-9). It would have been obvious to one skilled in the art at the time of the invention to apply controlled groups of amplifier elements as taught by de Koning to the combination made obvious by Phinney and Odom for the purpose of reducing amplifier power demand.

51. Claims 104 and 105 are essentially similar to Claims 78 and 79 respectively and are rejected on the same grounds.



Art Unit: 2644

***Response to Arguments***

52. Applicant's arguments with respect to all claims have been considered but are moot in view of the new ground(s) of rejection.

***Conclusion***

53. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Daniel Swerdlow whose telephone number is 703-305-4088. The examiner can normally be reached on Monday through Friday between 8:00 AM and 4:30 PM.

Art Unit: 2644

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Forrester Isen can be reached on 703-305-4386. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

ds



SPE, Art Unit 2644